

Apparatus for Inductive and Resistive Heating of an Object

Abstract of Disclosure

An apparatus for heating a flowable material comprises a core having a passageway formed therein for the communication of the flowable material, and an electric element coiled in multiple turns against the core in a helical pattern. The electric element, in use, heats the core both resistively and inductively. The electric element has no auxiliary cooling capacity. The electric element may be installed against the outside of the core, with an optional ferromagnetic yoke installed over it, or it may be installed against the inside of the core, embedded in a wear-resistant liner. The yoke and liner may be metallic material deposited such as by hot-spray technology and finished smooth.